REMARKS

Attached, in addition to amended claims, is a copy of Japanese Patent No. 63005263 Abstract, English translation cited by the examiner in the corresponding Australian application.

Claims 1-15 have been rejected as anticipated by Shi (U.S. Pat. No. 5,998,184). Reconsideration is respectfully requested in view of the attached amended claims and following considerations.

Shi discloses a bioreactor in FIGs. 2 and 3 wherein the basket or cage for the beads closely fits the inside of the container and the beads completely fill the basket or cage. The close fit and complete fill with beads is necessary to assure that all of the entering fluid through port 403 or 512 must pass through the basket or cage and contact the beads for the bioreaction to occur efficiently before the fluid exits through port 409.

In contrast, applicant's container is simply a beaker or pot of about 250 ml in size, and applicant's enclosure (basket or cage) is in the shape of a teabag about 1 ml in size. No flow into and out of the applicant's container is required. The shape of the applicant's container is irrelevant to the shape of applicant's enclosure. Flow through applicant's enclosure mostly occurs through movement of the enclosure and natural physical forces such as natural convection.

In Shi, the mesh size is described as 50-120; therefore, the beads or other supporting media within the basket must be larger than the mesh size and totally fill the basket.

In contrast, applicant's beads are 10-100 microns in diameter, and the mesh size is small enough to contain the beads. The applicant's beads need only to partially fill applicant's enclosure. The bacteria of interest are about 1 micron in size and therefore can pass with the fluid through the applicant's enclosure and attach to the beads.

Further, the transit time in the Shi bioreactor is measured in seconds or a few minutes. Longer periods of time would greatly reduce the efficiency of the bioreactor.

In contrast, with applicant's method for attaching bacteria, immersion of the enclosure is typically 30 min. to several hours to assure a complete bacterial sample by maximizing exposure time of bacteria to the beads.

Applicant's independent claims 1 and 5 have been amended to emphasize the large difference in size between the applicant's container and applicant's enclosure and further, the lack of any shape relationship.

With respect to the abstract from the Japanese patent, the basket or cage contains beads or balls of obviously visibly large size and the container closely fits about the basket to maximize exposure to the fluid and minimize any bypassing of fluid during reaction or subsequent washing. Thus, applicant's independent claims 1 and 5 distinguish over this patent as with Shi. The remaining claims 2-4 and 6-15 incorporate claims 1 and 5 by reference and therefore should be allowable upon the allowance of claims 1 and 5.

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EXAMINATION OF BLOOD

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Inventor:	TSUKIOKA YASUNOBU
Applicant:	YASUNOBU TSUKIOKA
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- european:	
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Priority number(s):	

Abstract of **JP63005263**

PURPOSE:To wash beads without generating a residual liquid in a reaction container and damaging the surfaces of the beads, by throwing a coarsely meshed basket body, in which beads coated with an antibody are allowed to fall, in the reaction container as it is.

CONSTITUTION:Beads (a) coated with an antibody are allowed to fall in the cavity of a coarsely meshed basket body (d) formed into a cylindrical shape capable of being inserted in and detached from a reaction container (b) to be thrown in the reaction container (b) along with the basket body (d). The beads (a) reacted with the specimen and reagent injected in the reaction container (b) by a distribution device 2 before or after said beads (a) are thrown in the container (b). Subsequently, washing is performed by the injection of washing water in the reaction container (b) by a distribution nozzle 21 and the removal of washing water under suction by a suction nozzle 21. Thereafter, the beads (a) are lifted up from the reaction container (b) together with the basket body (d) to wash the interior of the reaction container (b) and again returned to the reaction container (b) or transferred to other reaction container (b) along with the basket body (d) drawn up to measure the concn. of an antigen.